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OFFICE OF
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September 21, 2015

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Federal Highway Administration, Idaho Division
3050 Lakeharbor Lane, Suite 126
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Mr. Adam Rush, Public Involvement Coordinator
ITD Office of Communications
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Boise, Idaho 83703

Dear Mr. Inghram and Mr. Rush:

The U.S. Environmental Protection Agency has reviewed the Final Environmental Impact Statement for the US-95 Thorncreek Road to Moscow project in Latah County, Idaho (EPA Project Number 03-084-FHW). We are submitting comments in accordance with our responsibilities under the National Environmental Policy Act and Section 309 of the Clean Air Act. We appreciate this opportunity to offer comments.

In our review of the draft EIS for this project, we identified serious concerns regarding Alternative E-2 due to anticipated significant environmental degradation of aquatic resources, and Palouse prairie habitat and species that could be corrected by project modification or selection of another alternative. The document did not have information to support Alternative E-2 as the Least Environmentally Damaging Practicable Alternative under Section 404 of the Clean Water Act. We expressed concern about a lack of wildlife habitat connectivity and how that affects safety. Accordingly, we rated the DEIS as EO-2, Environmental Objections, Insufficient Information.

Other than the Modified W-4 Alternative, which shifted the original W-4 alignment to avoid a historic farmstead that is also a Section 4(f) Resource, the alternatives are unchanged from the Draft EIS. Alternative E-2 remains the ITD/FHWA preferred alignment based on the most recent safety analysis, which projects that the E-2 alignment would have fewer predicted crashes compared to the other alternatives. However, E-2 is predicted to have the greatest number of wildlife-vehicular crashes. All three action alternatives would meet AASHTO design standards, and be considered safe.[1]

In response to comments, ITD revised several of the technical reports, including the safety, weather, and wildlife analyses, with results that continue to support Alternative E-2 as the safest alignment. ITD also included a number of environmental commitments that acknowledge and address identified impacts to aquatic resources, Palouse prairie remnants, and wildlife. However, we believe that the commitments do not go far enough to meaningfully avoid and minimize negative impacts to critical aquatic and terrestrial

[1] Final EIS, p. 209

resources or demonstrate context sensitivity toward the affected community and landscape. Therefore, our environmental objections remain.

We offer detailed comments below that we hope will be useful as guidance, and as stimulus toward revising design to meet goals for both safety and effective environmental protection.

Need for Context Sensitive Solutions

In the response to EPA comments, the FEIS states that E-2 continues to be the preferred alternative because it is designed and located to provide the greatest safety benefit, which best meets the project purpose and need. The NEPA process calls for a range of reasonable alternatives to achieve project needs so that other important environmental, community, socio-economic needs and values, all of which support long-term sustainability for present and future generations, are given meaningful consideration with the ability to affect outcomes. We appreciate that ITD is offering environmental commitments in response to concerns, but unfortunately the measures presented are unclear, have not been developed in consultation and collaboration with resource agencies and the public, and overall would not avoid or substantially reduce project impacts. It appears that some measures could even increase impacts. We discuss these issues further in the relevant sections below.

Effects to Palouse Prairie Habitat

We are concerned that some of the mitigation measures would actually increase impacts to high value resources. For example, the extra clearing alongside the new highway to reduce wildlife-vehicular crashes would further reduce farmland and Palouse prairie remnants and expand weed dispersal. Similarly, de-prioritizing Palouse prairie restoration sites that are nearest the E-2 alignment would reduce and undermine future restoration efforts.

Safety Analysis

We appreciate that the safety analysis, which calculated number of crashes anticipated on the various alternative alignments, was done with AASHTO methods.[2] The number of crashes predicted by the analysis are based on the assumption that the number of approaches does not increase or decrease on any alignment, and that this would be ensured through ITD's enforcement of the Expressway Access Control.[3] [4] The FEIS also indicates that left and right turn lanes would be constructed at all county road intersections except where overpass structures are specified.[5] In Chapter 9, Environmental Commitments, the FEIS indicates that undercrossings and overpass structures for county roads would be designed to accommodate ungulates or passage of small terrestrial wildlife.[6] Based on this information, it is unclear whether the safety analysis crash predictions are valid, given that an unknown number of county road intersections would be replaced by under- or overcrossing structures, thereby eliminating existing access/intersection safety risks. Because ITD/FHWA are relying upon the safety analysis for

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[2] The First Edition of the AASHTO Highway Safety Manual (ITD 2012a) was used. Final EIS, p. 195.

[3] Final EIS, p. 195

[4] Expressway Access Control is defined as a segment of a highway designated for use as a through highway, with partially controlled access, accessible only at locations specified by ITD, and characterized by medians, limited at-grade intersections, and high speeds. An existing segment of state highway may only be designated as an expressway if payment is made to adjacent property owners for the restriction of existing access rights [IDAPA 39.03.42]. Final EIS, p. 42

[5] Final EIS, p. 42

[6] Final EIS, p. 281. Provisions for wildlife crossings would only be made where wildlife use is expected and where wildlife are welcome on private lands (deer, elk and moose).

preferred alternative selection, an accurate set of assumptions and conditions should be used, and disclosed, for making the calculations of predicted crashes.

We also note that 142.9 of 179.5 total crashes predicted for Alternative E-2 would occur in the rural divided multilane segment. This is relevant because ITD would increase the number of lanes and the speed limit[7] on the new alignment, would straighten, flatten, and widen the road, and would expand cleared area/obstacle-free zones along its length. All of these changes contribute to higher speeds.[8] While some features, such as a wider road or a wider cleared area, may increase safety, they only partially compensate for the higher rate and severity of crashes due to higher speed.[9] For example, a wider obstacle-free zone, less vegetation alongside the road, and lack of vertical structure (such as removal of trees) result in higher speed by drivers.

Numerous studies reveal the importance of speed on both the rate and severity of crashes.[10] A number of relevant conclusions are that:

- Higher driving speeds provide less time to process information and to act on it, and the braking distance is longer thereby reducing the ability to avoid collisions.
- Higher driving speeds lead to a higher crash rate.
- As speed increases, injury severity in crashes increases.
- The effect of an increase or decrease of speed is greater on rural than on urban roads, i.e., at the same percentage increase in speed, the crash rate on rural roads increases more than the crash rate on urban roads.
- Speed is dangerous if it is higher than the circumstances at that moment allow, e.g., because of rain, fog, or high traffic volume.
- The crash rate increases *more rapidly* when speed increases and vice versa.
- The crash rate is higher for an individual vehicle that drives faster than the other traffic on that road.

A long-term study on the effects of raising the speed limits on interstates across the U.S. found that the highest increases in road fatalities were on rural interstates (9.1%).[11] As stated in the FEIS, ITD is "balancing" safety with mobility when they accept safety reductions to increase travel speed. We request there also be balance for environmental and community values in selecting a preferred alternative.

Ecological Connectivity, Climate Change

We have emphasized that the selected alternative should (1) enable safe passage and dispersal for ungulates (moose, elk, deer), and other species, and (2) provide potential for connecting restored habitats and facilitating species' migration/adaptation to climate change. We appreciate that ITD would provide enlarged culverts to accommodate terrestrial wildlife at stream crossings. ITD also proposes to accommodate passage for ungulates at county road crossings, such as Eid Road, However, it is

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[7] To 65 mph

[8] Institute for Road Safety Research SWOV Fact sheet: Speed choice: the influence of man, vehicle, and road. SWOV, Leidschendam, the Netherlands, June 2012.

[9] Institute for Road Safety Research SWOV Fact sheet: Speed choice: the influence of man, vehicle, and road. SWOV, Leidschendam, the Netherlands, June 2012.

[10] Institute for Road Safety Research SWOV Fact sheet: The relation between speed and crashes, Leidschendam, the Netherlands, April 2012.

[11] Friedman, Hedeker, Richter. Long-Term Effects of Repealing the National Maximum Speed Limit in the United States. Am J Public Health, September 2009.

important to locate crossings where they would be most effective for wildlife. The location and design of crossings/connectivity structures should be informed by close and continued consultation with area biologists, by the best available science for providing safe wildlife passage *and* maintenance of ecosystem processes, and by pre- and post-construction assessment/monitoring. In this project setting, it would be beneficial to also consider the need for successful restoration of Palouse prairie remnants and recovery of endangered plant species, such as water howellia. These require maintenance/restoration of natural hydrology, native seed dispersal, pollinator survival and access. We recommend the *Interstate 90 Snoqualmie Pass East Mitigation Development Team Recommendation Package* (July 2006) as a helpful resource.

Aquatic Resources

Staff in our Aquatic Resources Unit offers the following comments regarding compliance with the 404(b)(1) Guidelines.

CWA Section 404(b)(1) Guidelines

Section 404 of the Clean Water Act (CWA) established the permitting program for the discharge of dredged and fill material into waters of the United States (U.S.) at specified disposal sites. This program is co-administered by the U.S. Army Corps of Engineers (Corps) and EPA. Section 404(b)(1) required the EPA, in conjunction with the Corps, to develop guidelines for the specification of disposal sites. The guidelines, referred to as the 404(b)(1) Guidelines (Guidelines), were to be patterned after the ocean discharge criteria developed by Congress and included in the CWA.

The purpose of the Guidelines is to restore and maintain the chemical, physical, and biological integrity of waters of the U.S. through control of discharges of dredged or fill material. They were codified in regulation (40 CFR Part 230) in 1980 and form the substantive environmental criteria used by the Corps when they review proposed discharges and issue permits under Section 404. The Guidelines prohibit issuance of a permit that would cause an avoidable or significant adverse impact to waters of the U.S.

Compliance with the Guidelines is required before a 404 permit can be issued by the Corps, and demonstrating compliance is the responsibility of the applicant. Section 230.10 contains the four principle requirements for compliance. Failure to *"clearly demonstrate"* that there is no *"practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem"*, in accordance with § 230.10(a), renders the project noncompliant with the Guidelines. Similarly, if an application contains insufficient information to determine compliance, the Guidelines require that no permit be issued.

Alternatives Analysis

Pursuant to §230.10(a), an alternatives analysis is conducted to identify practicable alternatives to a proposed discharge. An alternative is practicable if it is available and capable of being done and would achieve the overall project purpose. Practicable alternatives with fewer adverse impacts are presumed to exist for non-water dependent activities unless *"clearly demonstrated otherwise."* The environmental impacts of the various practicable alternatives are then compared so that the Corps can ensure it is authorizing only the practicable alternative which generates the least environmental damage. This alternative is referred to as the Least Environmentally Damaging Practicable Alternative (LEDPA). Except as permitted under Section 404(b)(2), the Guidelines prohibit the authorization of any alternative that is not the LEDPA.

NEPA requires the evaluation of reasonable alternatives, which the Council on Environmental Quality defines as "*those that are practicable or feasible from a technical and economic standpoint and those that achieve the project's purpose and need*" (DEIS, ES.4, p7). In contrast, the Guidelines require the analysis of practicable alternatives, and the analysis required by the Guidelines is not limited to the alternatives evaluated in the NEPA document. The identification of practicable alternatives to be analyzed is constrained only by the definition of practicable alternative (see **Definition of Practicability**).

Overall Project Purpose

The stated purpose of this project is to *"improve public safety and increase highway capacity on US-95 south of Moscow between Thorncreek Road (MP 337.67) and the South Fork Palouse River Bridge (MP 344.00)."* More specifically, the purpose is to meet the American Association of State Highway and Transportation Officials (AASHTO) Standards for widths, clear-zones, grades, and sight distance. According to the Screening of Alternatives Technical Report, these standards include a maximum of 5 percent grades, design speed of 70mph, a maximum of a 2,040-foot radius curve, and two 12-foot travel lanes with an 8-foot outside shoulder and 4-foot inside shoulder (p. 9). The same report notes that all roadway safety characteristics—such as curve geometry, lane width, shoulder width, shoulder slopes, clear zones, etc.—would be similar regardless of the alignment that is chosen (p. 10). In other words, all three proposed alternatives (Modified W-4, C-3, and E-2) would comply with AASHTO standards and achieve the purpose of improving public safety and increasing highway capacity.

A related but less defined purpose and need of this project is to reduce crash rates. The Screening of Alternatives Technical Report mentions the safest roadway is one with a rate of 0.60 crashes per million vehicle miles traveled, and that constructing a four lane divided highway reduces the number of accidents per year by one half (p. 10). Since all three proposed alternatives were carried forward in the Final EIS, it is presumed that each would achieve the desired goal of reducing crash rates.

Definition of Practicability

"An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes" [§ 230.10(a)(2)]. As noted above, the overall project purpose plays a critical role in determining whether a particular alternative is practicable or not. The consideration of cost, existing technology, and logistics is to determine whether one or more of these factors render an alternative unavailable and/or incapable of being done. This is a very high standard, and an alternative must be demonstrated to be impracticable before it can be excluded from analysis.

The purpose of consideration of cost is not to compare the cost of different alternatives but to determine whether or not the costs of a specific alternative are so prohibitively high (beyond industry standard) that the alternative is rendered unavailable and capable of being done. As stated in the preamble to the Guidelines: *"The consideration of cost is not an economic analysis." "The mere fact that an alternative may cost somewhat more does not necessarily mean it is unreasonably expensive and therefore not practicable"* (45 FR 85339). For these reasons, the following statement in the Screening of Alternatives Technical Report cannot be supported: "[Weighing] *the proposed alignments against one another based on cost, it was determined that alignments that cost the least were preferred"* (p. 11).

The consideration of existing technology and logistics are handled similarly to that of cost. For example, an alternative that requires the use of advanced (but existing) technology that is available and capable of being done (e.g., horizontal directional drilling versus trenching) is a practicable alternative. Similarly, an alternative that is logistically more complex but is still available and capable of being done is a practicable alternative.

Although not included in ITD's construction cost estimates at this time, as general information, it is EPA policy that use of life cycle, including maintenance, cost in the 404(b)(1) analysis of practicable alternatives is not appropriate. The EPA considers maintenance and operating costs or long term costs over the life cycle of the project as "cost of doing business." It does not affect the capability of a project to be done, and thus is not appropriate to be considered for determination of practicable alternatives under the Guidelines.

Evaluating practicability is a conclusive determination; that is to say, an alternative either is or is not practicable. Alternatives are evaluated independently. It is inappropriate to compare one alternative against another in determining practicability, for an alternative cannot be more or less practicable than another. For these reasons, the EPA cannot support ITD's reasoning that because Alternative E-2 would provide the "*greatest safety benefit which best meets the project purpose and need*", is it more practicable than the Modified W-4 or C-3 alternatives. If a particular threshold for crash rates must be met, this should be explicit in the definition and selection of practicable alternatives. Presently, all three alternatives carried forward in the Final EIS have been identified as being available and capable of being done, and would achieve the project purpose and need.

Compensatory Mitigation

A 1990 Memorandum of Agreement (MOA) between the Environmental Protection Agency (EPA) and the Department of Army established a three-part process, known as the mitigation sequence, to help guide mitigation decisions and determine the type and level of mitigation required under Clean Water Act Section 404 regulations. Compensatory mitigation is the third step in that sequence:

> Step 1. Avoid - Adverse impacts to aquatic resources are to be avoided and no discharge shall be permitted if there is a practicable alternative with less adverse impact.
>
> Step 2. Minimize - If impacts cannot be avoided, appropriate and practicable steps to minimize adverse impacts must be taken.
>
> Step 3. Compensate - Appropriate and practicable compensatory mitigation is required for unavoidable adverse impacts that remain. The amount and quality of compensatory mitigation may not substitute for avoiding and minimizing impacts (emphasis added).

The Final EIS acknowledges that the preferred alternative (E-2) would impact wetlands that are functioning higher for habitat, noting that these would be more difficult to replace (Chapter 4, Environmental Consequences, p. 176). The same section goes on to say, "*However, because the proposed wetland mitigation involves applying mitigation credit from the Cow Creek Mitigation Area, which is already established and fully functioning, there would be no temporal loss*" (p. 176). As highlighted under Step 3, above, it is inappropriate to rely on proposed compensatory mitigation as a substitute for avoidance and minimization. The Cow Creek Mitigation Area and/or Valencia Wetland Mitigation Bank may indeed offer the appropriate number and resource type of credits, such that there would be no temporal loss of wetlands. Before compensatory mitigation can be considered, however, an applicant must take all appropriate steps to first avoid and minimize impacts to aquatic resources. Additionally, even if/when there is no temporal loss of aquatic resources through compensatory

mitigation, the mitigation site is usually some distance from the impact site, such that an impact is still felt.

In general, the EPA supports the use of mitigation banks, as they are identified in the 2008 Final Mitigation Rule[12] (Mitigation Rule) as being the preferred method of compensatory mitigation. Unfortunately, the Final EIS does not provide complete details as to how ITD's proposed mitigation plan would comply with the Mitigation Rule. For example, permittees who intend to fulfill their compensatory mitigation obligations by securing credits from approved mitigation banks must address (c)(5) and (c)(6)—baseline information and determination of credits—of 40 CFR 230.94 or 33 CFR 332.4, Planning and documentation.
The EPA does not object to a permittee-responsible compensatory mitigation project, provided that: (a) an analysis could show that the mitigation project would be sufficient to offset the authorized impacts; and (b) the mitigation project shall be conducted in accordance with a mitigation plan that complies with the Mitigation Rule. Because permittee-responsible mitigation may occur at the site of the permitted impacts or at an off-site location within the same watershed, this form of compensatory mitigation may be determined to be more appropriate.

NEPA/404 Merger Process
The Final EIS does not include a complete 404(b)(1) analysis. The Federal Highway Administration encourages merging the NEPA and 404 process, noting that it expedites project decision-making and leads to one overall public interest decision, at one point in time[13]. Several states have a Memorandum of Understanding between their Department of Transportation, Corps, EPA, U.S. Fish and Wildlife Service, and NOAA Fisheries regarding transportation projects requiring a 404 permit. One such agreement emphasizes that the NEPA preferred alternative must be considered the LEDPA for the Corps to proceed with authorization under the CWA[14]. Again, the alternatives analysis required by the Guidelines is not limited to the alternatives evaluated in the NEPA document.

Conclusion regarding aquatic resources
The Final EIS does not adequately demonstrate how the proposed project complies with the Guidelines (i.e., that Alternative E-2 is the LEDPA). The Guidelines are explicit in that *"no discharge of dredged or fill material shall be permitted if there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem, so long as the alternative does not have other significant adverse environmental consequences"* [§230.10(a)].

The EPA continues to have the following concerns:

1. The approach to selecting a preferred alternative is inconsistent with the Guidelines. The Final EIS inappropriately compares one alternative against another in determining practicability. An alternative either is or is not practicable; one cannot be more or less practicable than another. Additionally, the mere fact that an alternative may cost more than another does not necessarily mean it is unreasonably expensive and therefore not practicable.

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[12] Compensatory Mitigation for Losses of Aquatic Resources; Final Rule (40 CFR Part 230, 33 CFR Parts 325 and 332)
[13] https://www.environment.fhwa.dot.gov/projdev/tdmnepa404.asp
[14] https://admin.rtd-fastracks.com/media/uploads/se/App_H_PA_1_M1.pdf

2. Absent a final project design to review, the EPA is unable to determine whether ITD has taken all appropriate and practicable steps to avoid and minimize adverse impacts, to ensure compliance with the Guidelines. Exhibit 29, Wetland Effects, shows only conceptual areas of impacts; site-specific drawings (e.g., cross-section views) are not available to discern how the project would in fact be constructed across mapped waters of the U.S.

3. The figures provided in Table 41 (Chapter 4, Environmental Consequences) do not provide the necessary detail to evaluate direct and indirect impacts to aquatic resources. For example, it is not clear whether the entire wetland acreage associated with each alternative would be filled—if so, E-2 would result in the greatest loss of wetlands; C-3, the least—or whether all tributary crossings would involve a discharge of fill below the ordinary high water mark. A practicable alternative may be a full span of these waters, rendering these figures somewhat immaterial. Comparing alternatives based on these figures, alone, is not sufficient in determining the LEDPA.

4. Despite our March 25, 2013 recommendation, a 404(b)(1) analysis was not included in the Final EIS. Since only the LEDPA can be permitted by the Corps, ITD must accept that the permitted action may differ from what was evaluated during the NEPA process. Additionally, since the information pertaining to aquatic resources was not consolidated into a single 404(b)(1) analysis, readers have to shift between multiple chapters, tables, exhibits, appendices, and technical reports to compare and contrast the various alternatives. This created difficulty in our ability to evaluate compliance with the Guidelines.

5. The wetlands within the project area drain into either the South Fork of the Palouse River or Thorn Creek, both of which are listed as impaired waterbodies by the Idaho Department of Environmental Quality (Chapter 4, Environmental Consequences, p. 173). Given that 97% of the Palouse wetlands have been lost, the remaining wetlands—albeit disturbed—serve a critical role in protecting and enhancing water quality of these and other downstream waters, as well as providing valuable habitat. Notably, the Total Maximum Daily Load (TMDL) Report for the South Fork Palouse River states: *"Most of the wetlands and flood plains in the Palouse have been eliminated by modern land use, urbanization, and transportation infrastructure. These activities have affected instream flows, channel sinuosity, and habitat diversity. The topography, soils, and climate make the Palouse watershed very susceptible to erosion. Land uses that contribute excess sediment, nutrients, and bacteria to the river can degrade water quality."*[15] We noted in our March 25, 2013 letter that the approved TMDL for the South Fork Palouse River specifically recommends riparian area restoration and stream buffer zones to reduce temperatures and filter nutrients, sediment, and bacteria from direct delivery to the river. The Final EIS does not appear to seriously consider the issue of declining quality and quantity of aquatic resources in the area.

6. The presumption that there are alternatives to non-water dependent activities that would not involve a discharge of fill (or that would involve less fill), has not been rebutted.

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[15] South Fork Palouse River Watershed Assessment and TMDLs, Executive Summary: http://www.epa.gov/waters/tmdldocs/palouse_river_sf_entire.pdf

Thank you for the opportunity to provide comments. We would like to continue working with ITD and other agencies regarding these many issues of concern. We also look forward to working collaboratively with the Corps and ITD during the 404 permitting process to resolve the issues raised in this letter. For further coordination and clarification of these comments, please contact me at (206) 553-1601 or via electronic mail at reichgott.christine@epa.gov, or contact Elaine Somers at (206) 553-2966 or via electronic mail at somers.elaine@epa.gov. For questions regarding aquatic resources, contact Tracy DeGering in our Boise Operations Office at (208) 378-5756, or at degering.tracy@epa.gov.

Sincerely,

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